Case Report

STAB WITH KNIFE IMPACTED IN VERTEBRAL BODY AN UN-USUAL FINDING ON IMAGING

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ABSTRACT

Thoraco-lumber spine injuries are caused by assault, accidents or even postural changes and are common, but this case which we report is an unusual finding in which blade of a knife was left in the vertebral body causing its fracture. A 40 years old man was brought to the emergency department with history of assault, metallic foreign body (Blade of knife) impacted in lower dorsal vertebra.

After X-ray lumbo sacral spine, CT Scan and other investigations, the injured was operated and discharged after one week. On follow-up visits, patient had no evidence of any neurological symptom/deficit.

CASE REPORT

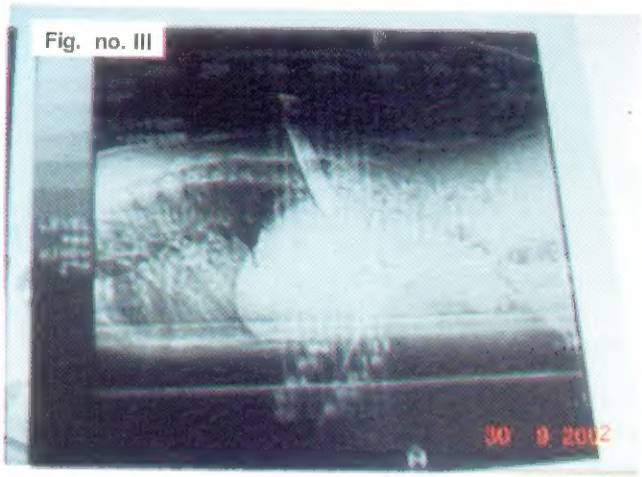
A 40 years old patient was brought to neurosurgery emergency department with stab injury at the back with the history of assault. Patient was fully conscious with BP 140/70 mm HG and pulse 80/minute. X-ray films showed impacted blade of a knife within T12 causing its fracture and extending to the anterior border of 12th thoracic vertebral body. The penetrated knife had partially obscured the underlying structures i.e. spinous process, lamina, pedicle and vertebral body **(Fig No. I and II)**, so, computerized tomography (CT) Scan was advised for proper localization and extension of injury. CT Scan was done in prone position at Radiology Department of Liaquat University Hospital Jamshoro. Anteroposterior (AP), lateral and multiple axial scans of 10mm thickness were taken through the lower dorsal and upper lumber spines. A metallic foreign body resembling shape of knife was seen piercing the posterior abdominal wall and splitting the muscles. There was evidence of splitting lamina and fracture of the body of 12th vertebra. Discontinuity of the cortex of the lamina of T11 vertebra was also seen along with the split of disc between T11 and T12. The interesting thing to note was that the spinal cord and the great vessels were undamaged by distance of few millimeters. **(Fig No. III and IV)**.

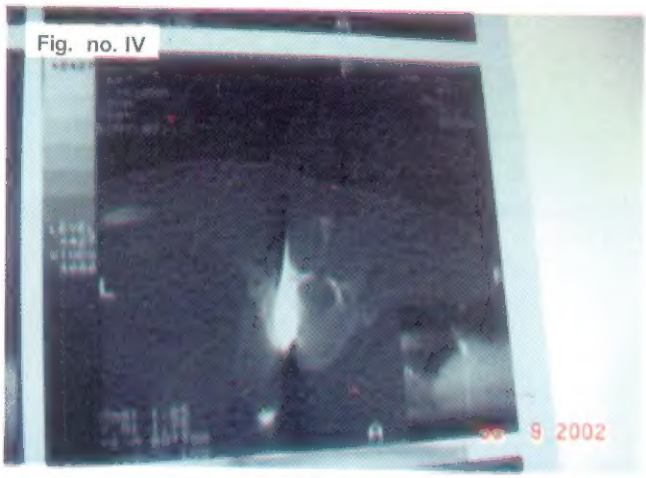
OPERATIVE NOTE

The patient was operated through para spinal linear incision and diathermic cautry was done. Muscles were cut, retracted and foreign body freed. Laminactomy was done. The cord was lying by the side. It was retracted and protected. The foreign body was removed with closure done in layers.

Figure no. I and II
showing dense metalic shadow from back to anterior border of 12th dorsal vertebral body

Figure no. III and IV: Metalic foreign body is seen penetrating from back to anterior border of 12th thoracic vertebral body





DISCUSSION

We present this unusual finding on imaging which was not earlier seen in our 19 years experience. As compared with other literature, stab wounds to the spinal cord are relatively uncommon in North America but even rare in case of presentation of such injury in a delayed fashion.[1] Normally, the thoracic spine has slight kyphotic curve as compared with the lordatic curve of cervical and lumber regions. These anatomic changes and difference in range of motion, increase the susceptibility to injury to thoraco-lumber region. Nearly two thirds of thoraco-lumber injuries occur at the levels of T12-L2.[2,3] Fractures are commonly the result of high energy injuries.[4] So, males of young age group are involved in it. In injuries with suspected fractures of T-L spine AP and Lateral views of plain films are routinely advised, which demonstrate most acute injuries. The lateral views are most useful for evaluating alignment, vertebral compression and changes in the disc spaces.[5,6,7] When changes in the facet joints or parsinterarticularis are suspected, oblique views and C.T Scan are advised for proper assessment.[3,8] The computed tomography is necessary to define more clearly the location and extent of injuries or to clarify suggestive areas on routine radiograph. C.T Scan is most useful for evaluating patients with neurologic damage, retropulse bone fragments and complex injuries before reconstruction.[5,9] In this case, the C.T Scan helped the surgeon in operation for removal of metallic foreign body. Neurological operative findings confirmed the imaging findings.

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